AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A disc drive ~~apparatus~~ for ~~creating~~ generating a tracking error signal ~~from reflected light resulting~~ from the reflection of a laser beam ~~as one beam~~ irradiated onto an optical disc, comprising:

a disc type information controller ~~first acquisition means~~ for ~~acquiring first information as information of~~ determining a type of the optical disc;

a disc drive mode controller ~~second acquisition means~~ for ~~acquiring second information showing that the optical~~ determining whether the disc ~~is operated in any of data~~ drive is operating in write mode ~~and data~~ or in read mode ~~to the optical disc~~;

a radio frequency (RF) signal detector ~~detection means~~ for detecting whether information is recorded on the optical disc based on the presence or absence of an RF ~~(Radio Frequency)~~ signal ~~from~~ in the reflected ~~light~~ laser beam;

a memory storing error signal tracking coefficients;

a tracking error signal coefficient controller configured to ~~third acquisition means for acquiring~~, when the RF signal in the reflected laser beam appears or disappears, ~~third information, which shows the presence or absence of the RF signal detected by the detection means, changes, one~~ select from the memory a tracking error signal coefficient ~~from~~ corresponding to the disc type, the mode of operation of the disc drive, and the presence or absence of the RF signal in the reflected laser beam ~~a plurality of predetermined coefficients to calculate the tracking signal stored in a storage~~

~~unit based on the first information, the second information, and the third information~~; and

a processor ~~arithmetic operation means~~ for ~~calculating~~ generating the tracking error signal based on ~~the~~ a detected intensity of the reflected ~~light~~ laser beam and on the selected tracking error signal coefficient ~~acquired by the third acquisition means~~.

2. (Currently amended) A disc drive ~~apparatus~~ according to claim 1, wherein:

when the ~~first information~~ disc type or the ~~second information~~ disc drive operating mode changes, the ~~third acquisition means acquires~~ tracking error signal coefficient controller selects one tracking error signal coefficient from ~~a plurality of the coefficients stored in the storage unit~~ the memory based on the ~~first information~~ disc type, the ~~second information~~ disc drive operating mode, and the ~~third information~~ presence or absence of the RF signal in the reflected laser beam; and

the ~~arithmetic operation means calculates~~ processor generates the tracking error signal based on the intensity of the reflected light and on the tracking error signal coefficient ~~acquired by the third acquisition means~~.

3. (Currently amended) A disc drive ~~apparatus~~ according to claim 1, wherein the ~~first acquisition means acquires the first information that shows any of a~~ disc type includes DVD-R (Digital Versatile Disk Specifications for Recordable Disc), ~~a~~ DVD-RW (DVD Specifications for Re-recordable Disc), ~~a~~ DVD+R (DVD Specifications for

+Recordable Disc), or ~~a~~ DVD+RW (DVD Specifications for +ReWritable Disc) ~~as the type of the optical disc~~.

4. (Currently amended) A ~~disc drive~~ method performed by ~~of driving~~ a disc drive ~~apparatus~~ for creating a tracking error signal from ~~reflected light resulting from~~ the reflection of a laser beam ~~as one beam~~ irradiated onto an optical disc, the method comprising:

~~a first acquisition step of acquiring first information as information of~~ determining a type of the optical disc;

~~a second acquisition step of acquiring second information showing that the optical~~ determining whether the disc drive is ~~operated in any of data~~ operating in write mode ~~and data~~ or in read mode ~~to the optical disc~~;

~~a detection step of~~ detecting whether information is recorded on the optical disc based on the presence or absence of a ~~an~~ radio-frequency (RF) signal ~~from~~ in the reflected ~~light~~ laser beam;

~~a third acquisition step of acquiring,~~ when the RF signal in the reflected laser beam appears or disappears, ~~third information, which shows the presence or absence of the RF signal detected by the detection means, changes, one~~ selecting from memory a tracking error signal coefficient corresponding to the disc type, the mode of operation of the disc drive, and the presence or absence of the RF signal in the reflected laser beam ~~from a plurality of predetermined coefficients to calculate the tracking signal stored in a storage unit based on the first information, the second information, and the third information~~; and

~~an arithmetic operation step of calculating~~ generating the tracking error signal based on ~~the~~ a detected intensity of the reflected ~~light~~ laser beam and on the selected tracking error signal coefficient ~~acquired by the third acquisition means~~.

5. (Currently amended) A ~~recording~~ computer-readable storage medium storing ~~in which a computer readable disc drive~~ a computer program which, when executed by a disc drive, causes the disc drive to perform a method for generating ~~is recorded to create~~ a tracking error signal from ~~reflected light resulting from~~ the reflection of a laser beam ~~as one beam~~ irradiated onto an optical disc, ~~wherein the program comprises~~ the method comprising:

~~a first acquisition step of acquiring first information as information of~~ determining a type of the optical disc;

~~a second acquisition step of acquiring second information showing that the optical~~ determining whether the disc drive is ~~operated in any of data~~ operating in write mode ~~and data~~ or in read mode ~~to the optical disc~~;

~~a detection step of~~ detecting whether information is recorded on the optical disc based on the presence or absence of a ~~an~~ radio-frequency (RF) signal ~~from~~ in the reflected ~~light~~ laser beam;

~~a third acquisition step of acquiring,~~ when the RF signal in the reflected laser beam appears or disappears, ~~third information, which shows the presence or absence of the RF signal detected by the detection means, changes, one~~ selecting from memory a tracking error signal coefficient corresponding to the disc type, the mode of operation of the disc drive, and the presence or absence of the RF signal in the

reflected laser beam ~~from a plurality of predetermined coefficients to calculate the tracking signal stored in a storage unit based on the first information, the second information, and the third information~~; and

~~an arithmetic operation step of calculating~~ generating the tracking error signal based on ~~the~~ a detected intensity of the reflected ~~light~~ laser beam and on the selected tracking error signal coefficient ~~acquired by the third acquisition means~~.

6. (Canceled)

7. (New) A disc drive according to claim 1, wherein the processor generates the tracking error signal based further on a difference between the intensity of the reflected laser beam at first and second locations and on the tracking error signal coefficient multiplied by the difference.

8. (New) A method according to claim 4, wherein the tracking error signal is generated based further on a difference between the intensity of the reflected laser beam at first and second locations and on the tracking error signal coefficient multiplied by the difference.

9. (New) A computer-readable storage medium according to claim 5, wherein the tracking error signal is generated based further on a difference between the intensity of the reflected laser beam at first and second locations and on the tracking error signal coefficient multiplied by the difference.